RJA 2/16/22

JS 2/16/22

SAT Report for Case # P-17-0281

General

[redacted]

Report Status: Complete **Status Date:** 05/01/2017

CRSS Date: 05/01/2017 **SAT Date:** 05/02/2017 **SAT Chair:** D. Pagan-Rodriguez

Consolidated PMN?

Consolidated Set:

Submitter: [redacted]

CAS Number: [redacted]

Ecotox Related Cases: [redacted]

Health Related Cases:

Chemical Name: [redacted]

Use: Water-reducible resin [redacted] This is a polymer exemption (E1).

Trade name: [redacted]

PV Max (kg/yr): [redacted]

Ecotox Assessor: J. Gallagher **Fate Assessor:** Laurence Libelo **Health Assessor:** E. Falke

Physical Chemical Information

Molecular Weight:	[redacted]	**Physical State - Neat:**	[redacted] (Est.)		
Percent 500:	[redacted]	**Percent 1000:**	[redacted]		
Melting Point (Measured):		**Melting Point (est):**		**MPD (EPI):**	
Vapor Pressure:		**Vapor Pressure (est):**	[redacted]	**VP (EPI):**	
Water Solubility:		**Water Solubility (EST):**	[redacted]	**Water Solubility (EPI):**	
Log Kow:				**Log Kow (EPI):**	
Log P:		**Log P Comment:**			

SAT Concern

Ecotox Rating (1):	1	**Ecotox Rating Comment (1):**	
Ecotox Rating (2):		**Ecotox Rating Comment (2):**	
Health Rating (1):	1-2	**Health Rating Comment (1):**	
Health Rating (2):		**Health Rating Comment (2):**	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
3	1	1	

Exposure Based Review (Health)?	
Exposure Based Review (Ecotox)?	
SAT Keywords:	IRRIT, DEV (UNCERT)

Fate Assessment Summary:	P-17-0281 FATE: [redacted] Time for complete ultimate aerobic biodeg > mo Sorption to soils/sediments = v.strong PBT Potential: P3B1 *CEB FATE: Migration to ground water = negl Overall wastewater treatment removal is 90% via sorption. Sorption to sludge is strong based on high molecular volume. Air Stripping (Volatilization to air) is negligible based on high molecular volume. Removal by biodegradation in wastewater treatment is negligible based on high molecular volume. The aerobic aquatic biodegradation half-life is greater than months based on high molecular volume. The anaerobic aquatic biodegradation half-life is greater than months based on high molecular volume. Sorption to soil and sediment is very strong based on high molecular volume. Migration to groundwater is negligible based on high molecular volume. PMN Material:

	High Persistence (P3) is based on the anaerobic biodegradation half-life and high molecular volume. Low Bioaccumulation potential (B1) is based on high molecular volume.
Removal in WWT/POTW (Overall):	90

Condition	Rating Values w/ Rating Description	Comment
WWT/POTW Sorption:	3	
WWT/POTW Stripping:	4	
Biodegradation Removal:	4	
Biodegradation Destruction:		
Aerobic Biodeg Ult:	4	
Aerobic Biodeg Prim:		
Anaerobic Biodeg Ult:	4	
Anaerobic Biodeg Prim:		
Hydrolysis (t1/2 at pH 7,25C) A:		
Hydrolysis (t1/2 at pH 7,25C) B:		
Sorption to Soils/Sediments:	1	
Migration to Ground Water:	1	
Photolysis A, Direct:		
Photolysis B, Indirect:		
Atmospheric Ox A, OH:		
Atmospheric Ox B, O3:		

Health Assessment

Health Summary: Absorption of the low molecular weight fractions [redacted]) is poor all routes(pchem).

Concern for irritation for the low molecular weight fractions based on [redacted] moieties. There is [redacted] a [redacted] compound. Some [redacted] compounds have been shown to induce developmental toxicity. Uncertain concern for developmental toxicity for the molecular weight species containing [redacted] moieties by uncertain analogy to [redacted]

Routes of Exposure: Dermal Drinking Water Inhalation

Test Data Submitted

Test Data Submitted: Other Test data information: No concerns for alkoxysilane moieties because they are not expected to be reactive in this PMN substance.

Ecotox Assessment

Test organism	Test Type	Test Endpoint	Predicted	Measured	Comments
Fish	96-h	LC50	*		
Daphnid	48-h	LC50	*		
Green Algae	96-h	EC50	*		
Fish	-	Chronic Value	*		
Daphnid	-	Chronic Value	*		
Green Algae	-	Chronic Value	*		

Factors	Most Sensitive Endpoint	Assessment Factor	CoC	Comment
Acute Acquatic:		5		*
Chronic Acquatic:		10		*

Ecotox Route of Exposure?	No releases to water

Factors	Values	Comments
SARs:	Alkoxysilane	
SAR Class:	Alkoxysilane	
TSCA NCC Category?	Alkoxysilanes	

Recommended Testing

Ecotox

Value Comments

Predictions are based on SARs for alkoxysilane;
SAR chemical class = alkoxysilane; [redacted] S < 1 ppb (P); pH7; effective concentrations based on 100% active ingredients and nominal concentrations; hardness <150.0 mg/L as CaCO3; and TOC <2.0 mg/L;

Focus Report/Decision Document:
Environmental
Hazard and Risk (P-17- 0281)

Environmental Hazard:Environmental hazard
is relevant to whether a new chemical substance is likely to present unreasonable risks because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA estimated environmental hazard of this new chemical substance using hazard data on analogous chemicals. Based on these estimated hazard values from the analogous chemicals, EPA concludes that this chemical substance has low environmental hazard.

· Substance falls within a TSCA New Chemicals Category of Alkoxysilanes.
· SAR chemical class of alkoxysilanes.

· For the assessed PMN [redacted] low hazard is based on no effects at saturation.
· If a polymer under the same CAS RN is produced differently [i.e, changes in the proportion of repeating units, the average molecular weight, percentage of low molecular weight (LMW) components, and/or proportion of surface acting monomers], hazard concerns will remain low.

Environmental Risk:
· Risks were not identified for ecotoxicity.

Testing Recommendations:
· None

Ecotox
Factors Comments